



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/767,743

01/30/2004

Christian Bauer

713-1009

5720

33712

7590

11/20/2006

LOWE, HAUPTMAN, GILMAN & BERNER, LLP (ITW)

1700 DIAGONAL ROAD

SUITE 300

ALEXANDRIA, VA 22314

EXAMINER

REESE, DAVID C

ART UNIT

PAPER NUMBER

3677

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/767,743

Applicant(s)

BAUER, CHRISTIAN

Examiner

David C. Reese

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-11, 13-17, 19, 20 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-11, 13-17, 19, 20 and 28-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

THIS NON-FINAL ACTION IS RESPONSIVE TO THE AMENDMENT FILED 8/31/2006.

- Claims 1-5, 12, 18, and 21-27 are canceled.
- Claim 34 was added.
- Claims 6-8, 14, and 19-20 were amended.
- Claims 6-11, 13-17, 19-20, and 28-34 are pending.

#### ***Allowable Subject Matter***

[1] The indicated allowability of claims 31-33 are withdrawn in view of the previously cited reference(s) to Bennett and then Kanie et al. Rejections based on the reference(s) follow.

#### ***Claim Objections***

[2] Claim 34 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The following limitation from the instant claim "grommet as set forth in claim 31" must be incorporated into said claim for the claim to be in proper dependent form. Such an amendment to the claim, thereby making the claim in independent form, however, may also make the claim subject to a future restriction requirement.

#### ***Claim Rejections - 35 USC § 103***

[3] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 3677

[4] Claims 6-10, 11, 13-17, 19-20, and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett, US-3,444,917, in view of Kanie et al., US-2003/0143054.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 6, Bennett teaches of a grommet (10) (see figures 1-3) adapted to be inserted into an opening (13a) of a sheet member (13) having opposite upper and lower surfaces, said grommet (10) comprising:

- a shank (11) extending in an axial direction of said grommet (10) and having opposite upper and lower ends;

- a head (12) connected to the upper end of said shank (11) and comprising a flange adapted to engage the upper surface of the sheet member (13) when said shank (11) is placed into the opening (13a);

- wherein said shank (11) comprises

- a shoulder (11a) in a region adjacent the head (12), said shoulder (11a) being adapted to be placed below an edge of the opening (13a) when said shank (11) is moved transversely to said axial direction, thereby preventing withdrawal of said shank (11) from said opening (13a); and

- an outer surface section inclined relative to the axial direction and connecting said shoulder (11a) and the lower surface of said head (12) (see figure 1), for engaging the edge of the

Art Unit: 3677

opening (13a) and drawing said shank (11) into the opening (13a) when said shank (11) is moved transversely to said axial direction; and

wherein, when said shank (11) is seen in said axial direction, said shoulder (11a) is confined between an outer edge of said shank (11) and a first boundary line intersecting said outer edge at first and second points, and said outer surface section is confined between said first boundary line and a second boundary line that intersects the outer edge of said shank (11) at a third point, and a spacing between said first and second boundary lines as the second boundary line extends from the third point toward the first point (see the triangular shape of 11a in figure 1).

The difference between the claim and Bennett is that Bennett does not expressly state of a locking tab coupled to said shank between the upper and lower ends of said shank and radially flexible relative to said shank; said locking tab capable of being snapped into the opening when the grommet is placed into the opening. Kanie et al. discloses a grommet similar to that of Bennett. In addition, Kanie et al. further teaches of a locking tab (7) coupled to the shank (3) between the upper and lower ends of said shank (3) and radially flexible ([0025]) relative to said shank (3); said locking tab (7) capable of being snapped into the opening when the grommet is placed into the opening. It would have been obvious to one of ordinary skill in the art, having the disclosures of Bennett and Kanie et al. before him at the time the invention was made, to modify the shank of Bennett to include at least a locking tab, as in Kanie et al. One would have been motivated to make such a combination because one would want a flexible locking tab for further securement including a large fixing force and sealing properties while securing the

Art Unit: 3677

grommet to connecting members, as well as helping to secure the entire attachment as a whole when a screw into said grommet is inserted, as taught by Kazino et al.

Re: Claim 7, Bennett discloses wherein the outer surface section is planar, and the shoulder (11a) is planar and perpendicular to the axial direction.

Re: Claim 8, Kanie et al. discloses wherein said locking tab (7) has a lower end directly connected to said shank (3) and an upper end which is free of any direct attachment (via 10) with said shank (3) and is connected to said shank (3) exclusively via the lower end of said locking tab (7).

Re: Claim 9, Bennett discloses wherein said shank (11), has a rectangular cross section taken perpendicular to said axial direction, and

the shoulder (11a) is located in a corner portion of said rectangular cross section, longitudinally extends toward an adjacent corner portion of said rectangular cross section, and has a width that decreases along said longitudinal extent.

Re: Claim 10, Bennett discloses wherein the region of said shank (11) with said shoulder (11a) is less radially flexible than said locking tab (in view of 7 of Kanie et al.).

Re: Claim 13, Bennett discloses wherein said first and second boundary lines converge at said first point (see 11a in fig. 1).

Re: Claim 14, Bennett discloses wherein said shank (11) has an approximately rectangular cross section, taken perpendicular to said axial direction in the region adjacent to said head (12), and said shoulder (11a) and said outer surface are located within and in a corner portion of the approximately rectangular cross section.

Art Unit: 3677

Re: Claim 15, Kanie et al. discloses wherein said locking tab (7) projects radially outwardly from a middle of a side of the approximately rectangular cross section.

Re: Claim 16, Bennett discloses wherein said shank (11) comprises at least two said shoulders (11a) and two said outer surface sections being located in two diagonally opposite corner portions of said shank (11).

Re: Claim 17, Bennett discloses wherein each of said shoulders (11a) and outer surface sections has an approximately triangular shape (see figure 1) having a side which is not parallel with any side of the approximately rectangular cross section of said shank (11) and which is defined by at least one of said first and second boundary lines (see figure 1).

Re: Claim 19, Bennett discloses wherein said shank (11) and said head (12) together define an axial bore (9) adapted to receive and retain therein an elongated fastening element (S).

Re: Claim 20, Kanie et al. discloses comprising a plurality of said flexible locking tabs (7 of Kanie et al.), wherein said shoulder (11a of Bennett) is not part of any of said locking tabs (7 of Kanie et al.).

Re: Claim 28, Bennett discloses wherein said first and second boundary lines are straight lines (see figure 1).

Re: Claim 29, Bennett discloses wherein said first and second boundary lines converge toward each other and define therebetween an acute angle (see figure 1).

Re: Claim 30, Bennett discloses wherein said first boundary line and the outer edge of shank (11) define at said first point another acute angle (see figure 1).

Art Unit: 3677

As for Claim 31, Bennett in view of Kanie et al. teach of a grommet (10) (see figures 1-3) adapted to be inserted into an opening (13a) of a sheet member (13) having opposite upper and lower surfaces, said grommet (10) comprising:

- a shank (11) extending in an axial direction of said grommet (10) and having opposite upper and lower ends;

- at least a locking tab (in view of 7 of Kanie et al.) coupled to said shank (11) between the upper and lower ends of said shank (11) and radially flexible relative to said shank (11); and

- a head (12) connected to the upper end of said shank (11) and comprising a flange adapted to engage the upper surface of the sheet member (13) when said shank (11) and said locking tab (in view of 7 of Kanie et al.) are snapped into the opening (13a);

- wherein said shank (11) comprises

- a shoulder (11a) in a region adjacent the head (12), said shoulder (11a) being adapted to be placed below an edge of the opening (13a) when said shank (11) is moved transversely to said axial direction after being snapped (in view of Kanie et al.) into the opening (13a) thereby preventing withdrawal of said shank (11) from said opening (13a); and

- an outer surface section inclined relative to the axial direction and connecting said shoulder (11a) and the lower surface of said head (12) (see figure 1), for engaging the edge of the opening (13a) and drawing said shank (11) into the opening (13a) when said shank (11) is moved transversely to said axial direction; and

- wherein, when said shank (11) is seen in said axial direction, said shoulder (11a) is confined between an outer edge of said shank (11) and a first boundary line intersecting said



Art Unit: 3677

outer edge at first and second points, and said outer surface section is confined between said first boundary line and a second boundary line (see figure 1);

the outer edge of the shank (11) comprises first and second sections which are angled with respect to each other and intersect the first boundary line at said first and second points, respectively (see figure 1);

the second boundary line intersects the second section at a third point; and

a spacing between said first and second boundary lines decreases as the second boundary line extends from the third point toward the first point (see figure 1).

Re: Claim 32, Bennett discloses wherein the outer edge of the shank (11) further comprises a corner section located between and connecting said first and second sections; and

the third point is farther from the corner section than the second point (see figure 1).

Re: Claim 33, Bennet discloses wherein said first and second sections and said first and second boundary lines are straight (see figure 1);

said first section and said first and second boundary lines are slanted at acute angle relative to each other; and

the corner section is curved (see figure 1).

Re: Claim 34, Bennet discloses a sheet member (13) having opposite upper and lower surfaces and an opening (13a) connecting the upper and lower surfaces; and

A grommet as set forth in claim 31 plugged in said opening (13a).

***Claim Rejections - 35 USC § 103***

[5] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3677

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[6] Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett, US-3,444,917, in view of Kanie et al., US-2003/0143054, and in further view of Mizuno, US-6,560,819.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 11, Bennett in view of Kanie et al. teach that of the above claims.

The difference between the claim and Bennett in view of Kanie et al. is the claim recites that the outer surface section extends radially inwardly. Mizuno discloses a grommet similar to that of Bennett in view of Kanie et al. In addition, Mizuno further teaches of a variety of inclined surfaces for an outer surface (Figs. 7A-7D). It would have been obvious to one of ordinary skill in the art, as well as art recognized equivalence, having the disclosures of Bennett in view of Kanie et al. and Mizuno before him at the time the invention was made, to modify the shoulder (11a) of Bennett in view of Kanie et al. to include the structure of that as provided by Mizuno in his Fig. 7C. One would have been motivated to make such a combination because such a configuration of utilizing an inclined surface as proposed by one of embodiments by Mizuno, specifically of that shown in Fig. 7C would, as stated in col. 2, beginning with line 4,

Art Unit: 3677

“that regardless of the thickness of the member being mounted, there is no possibility that the entire grommet can move axially.” Also, as stated by Mizuno in col. 1, line 65, “The inclined surfaces push a member being mounted in a upward direction and an upper surface of the member being mounted is brought into close contact with a flat back surface of the head”. This disclosed by Mizuno is in turn comparable to the purpose of said inclined surface in the applicant’s invention, the disclosure of which states “ensuring that the head gets into engagement with the support member side and produces a sufficient sealing action, as well as ensuring that the grommet, when under a tensile load, does not come loose from sheets of lesser thicknesses.”

It is further stated by the applicant that a specific problem with fasteners of the like is that “the distance between the shoulder and the underside of the head cannot be prevented from being larger than the thickness of the support member. This can cause the grommet, when under a load, to come loose from the support member”. The inclination provided by the shoulder, stated by the applicant, helps solve this problem. Mizuno, in the same light, provides a similar disclosure indicating, as stated in the above paragraph, an emulative purpose of such an inclined surface, and since the reference addresses this narrow problem, a person seeking to solve that exact same problem would consult the references and apply their teachings together.

Art Unit: 3677

***Response to Arguments***

[7] Applicant's amendment and remarks filed 8/31/2006 regarding rejections under 35 U.S.C. 102 have been fully considered. Due to the amendment to the claims, the prior art fails to further anticipate. Accordingly, the Examiner has withdrawn all previous rejections over Sato, US-4,927,306; though as stated above, the allowable subject matter as indicated in earlier prosecution of the case has been rescinded in view of the previously cited prior art of Bennett, US- 3,444,917, in view of Kanie et al., US-2003/0143054. Consequently, all rejections are considered moot to said new grounds of rejection.

***Conclusion***

[8] **THIS ACTION IS NON-FINAL**


[9] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J.J. Swann can be reached at (571) 272-7075. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DCR

David Reese  
Assistant Examiner  
Art Unit 3677

  
11/13/06

  
ROBERT J. SANDY  
PRIMARY EXAMINER